

Sulfide by Iodometric Method SM 18 th 4500-S ²⁻ E						Page 1 of 1
Facility Name: _____ VELAP ID: _____						
Assessor Name: _____ Analyst Name: _____ Inspection Date: _____						
Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments	
Records Examined: SOP Number/ Revision/ Date _____ Analyst: _____						
Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____						
Are samples that are collected for the determination of <u>dissolved sulfides</u> treated in the field with aluminum chloride, allowed to settle and flocculate, and the clear supernatant collected for analysis of dissolved sulfide? (<i>Step may be omitted if sample contains no suspended matter.</i>)	4500-S ²⁻ B					
When samples are pre-treated in the field for the determination of <u>dissolved sulfides</u> , does the chain of custody or other documentation include a record of flocculation step?	2003 NELAC 5.5.7.3					
Are samples preserved with zinc acetate?	4500-S ²⁻ A.3					
Is 0.0250N sodium thiosulfate solution standardized with bi-iodate solution? (Alternatively, the lab may purchase standardized sodium thiosulfate.)	4500-S ²⁻ E.1.c, 4500-O C.2.e					
Is 0.0250N standard iodine solution standardized against 0.0250N Na ₂ S ₂ O ₃ using starch solution as indicator? (Alternatively, the lab may purchase standardized iodine solution.)	4500-S ²⁻ E.1.b					
Is an amount of iodine solution estimated to be an excess over the amount of sulfide present, placed into a flask, and diluted with distilled water to about 20 mL?	4500-S ²⁻ E.2.a					
Is 2 mL of 6N HCl added to the aliquot of iodine solution?	4500-S ²⁻ E.2.a					
Is a 200 mL aliquot of sample pipetted into the flask, discharging sample under the solution surface?	4500-S ²⁻ E.2.a					
If iodine color disappears, is more iodine added so that color remains?	4500-S ²⁻ E.2.a					
Is the sample back-titrated with Na ₂ S ₂ O ₃ solution, adding a few drops of starch solution as the end point is approached, and continuing until blue color disappears?	4500-S ²⁻ E.2.a					
If sulfide precipitates with zinc and ZnS is filtered out, is the filter with precipitate diluted with 100 mL water, retreated with iodine and HCl, and retitrated?	4500-S ²⁻ E.2.b					
Are results calculated using the following formula?	4500-S ²⁻					

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$\text{mg S}^{2-}/\text{L} = \frac{[(A \times B) - (C \times D)] \times 16000}{\text{mL sample}}$ <p>where: A= mL iodine solution B= normality of iodine solution C= mL Na₂S₂O₃ solution D= normality of Na₂S₂O₃ solution</p>	E.3				
Are 5% or more of the samples analyzed in duplicate?	1020B.6				
When samples are pre-treated in the field (flocculation), is the analysis result reported as Dissolved Sulfide?	2003 NELAC 5.5.10.2.h				
Notes/ Comments:					